



Farm, Garden
and
Orchard Implements

Bateman and Companies, Inc.

347 MADISON AVENUE
NEW YORK CITY

Manufacturers of

IRON AGE Cultivators, Potato Machinery, Sprayers, Planters, Garden Tools, etc.; CHICOPEE LINE Plows, Corn Huskers and small farm implements; McWHORTER Fertilizer Distributors, Seed Drills and Potato Planters; WILKINSON Plows, Scrapers, Wheelbarrows, etc.; CLARK'S Cutaway Harrows; CURTIS "Easy-Pull" Manure Spreaders; WORCESTER-BUCKEYE Mowers; ACME Pulverizing Harrows, etc., etc.

District Sales Branches:

Grenloch, N. J., Worcester, Mass.,
and Chicopee Falls, Mass.
Form No. 1602—15M—6-20



The „
Acme Way
To Crops That
Pay



to New Bateman & Co. Co.



FIGURE 1
Furrow Slices on New Plowed Soil Before "ACME" Harrowing.



FIGURE 2
Plowed Ground Partly Worked Down with the "ACME" Harrow.

MAKING A PERFECT SEED BED

Prof. King, in his excellent book, "The Soil," explains just what should be accomplished by plowing and harrowing.

- 1.—Develop and maintain a suitable home for the root systems of the crop plant.
- 2.—Increase the soil humus by thoroughly working in organic matter. This favors the growth of soil "yeast" and increases the ability of the soil to hold water.
- 3.—Control the amount and movement of soil moisture.
- 4.—Provide an abundance of air for the use of the plant roots.
- 5.—Preserve plant food and moisture by destroying the weeds.
- 6.—Prevent soil loss through surface washing.

Let us take up the making of a seed bed for a corn crop. Figure 1 shows the furrows just as left by the plow. There are air-spaces between the furrow slices. The whole mass is firmly bound together by the roots of the sod. It would soon dry out if left in this condition.

Figure 2 shows the soil after being worked once over with an "ACME" PULVERIZING HARROW. The air spaces have been partially filled, the entire surface has been loosened and the under soil partially pulverized and compacted. The long, curving blades of this excellent tool are well adapted for preparing

corn ground. The flat front end crushes clods and lumps, compacting the whole plowed depth. Between each pair of blades or coulters is a spur which still further aids in the complete pulverization of the soil.

The condition of the soil after a second passage of the Harrow is shown in Fig. 3. The spaces between the furrow slices have nearly disappeared. The "ACME" Harrow rides over plowed sod, presses it down and compacts it firmly. Plowed under manure has been thoroughly mixed into the soil, the lumps have been broken into small pieces, and the entire surface left smooth and level. This ground might be planted without further harrowing and a fair crop secured.

But, the careful farmer will not be satisfied until he has prepared a PERFECT SEED BED. Such a seed bed is shown in Figure 4. The lumps have been reduced to granules. The whole surface has been worked to a good depth. The deeper soil has been made hard and firm.

In such a home the seeds have the best possible chance to sprout and grow. The air can enter the loose mellow soil. The soil moisture can rise from beneath, because the soil has been made firm, and the air-spaces worked out. A seed bed like this is within reach of every farmer, since "ACME" Pulverizing Harrows are moderate in price, and will last for many years, paying for themselves each year in the increased crops.

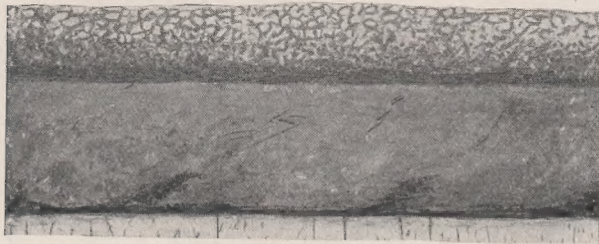


FIGURE 3
Air Spaces and Voids Worked Out and the Capillary Action Restored Through Medium of All Plowed Depth Compact and in Perfect Contact with Under Soil.



FIGURE 4
A Perfect Seed Bed Prepared with "ACME" Harrow. Compact, Pulverized Soil Below Seeding Depth and a Perfect Mulch Above.

ACME COULTERS—THEIR SCIENTIFIC PRINCIPLES

The Standard Coulters

The standard coulters of the "ACME" Harrow are of a shape and form to give results in soil cultivation that cannot be obtained by the use of harrows of other forms. The shape of the coulters insures thorough pulverizing of the soil. The flat front end crushes clods and lumps, compacting the whole plowed depth and eliminating all air spaces. The left and right bends turn, cut and still further pulverize the soil that has been compacted by the front ends. The crushing spurs—one between each coulters on the "ACME" Harrow—act in the same manner as the flat front end of the coulters to crush clods and lumps, still further aiding in the complete pulverizing of the soil. In the working position the coulters have a slope downward towards the rear. That is, the front end of the coulters is off the ground, while the rear is in the ground; this angular position to the ground, with its easy curves, makes the coulters present the least resistance to the soil being worked, and makes the harrow of very light draft. The steel used in the "ACME" coulters is especially tough and hard. Their shape enables them to cut clods or lumps, sod, stubble or stable manure that has been plowed under.

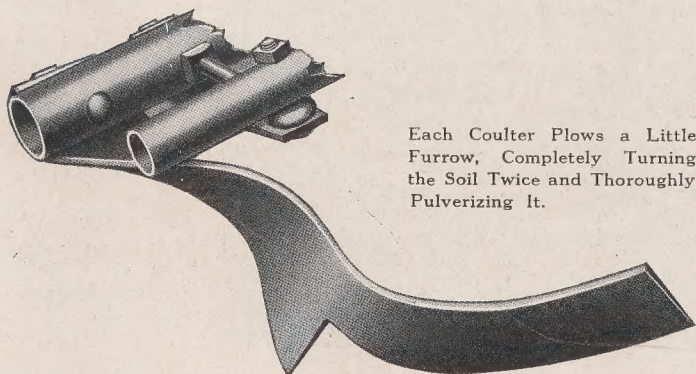
The Overlapping "XL" Coulters

Below are shown the coulters of the "XL" Series "ACME" Harrow, which are longer and have more

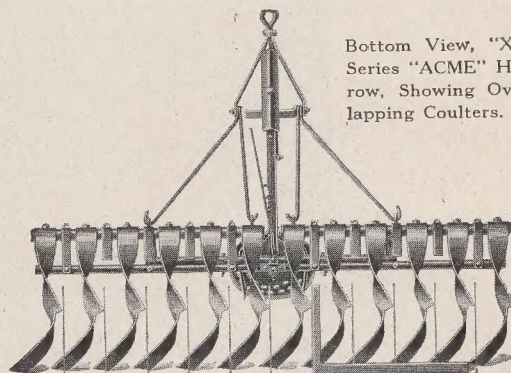
flare than the standard pattern. This illustrates the principle upon which the coulters work. The extra length and flare of the blades give a harrow that is needed in localities where summer fallowing is practiced and where wild oats, grasses and other weed pests are being persistently fought by the progressive farmer. Note from the vertical lines the coulters overlap each other, causing the entire surface of the ground to be cut over when worked with the "XL" Series "ACME" Harrow. This style of harrow will cut all weed roots in fallow ground, and is the only harrow that will do this important work. It is light in weight, hence light in draft.

Used as a weeder in small weed growth, the coulters cut the roots, and, due to the turning action on the soil, all roots are exposed to the sun and air, where they are dried up and effectively killed. There are no uncut strips left where weed growth is thick, as with other styles of harrows and cultivators.

THE "XL" SERIES "ACME" HARROW is also invaluable in the orchard as a summer tillage tool. It works fast, gets every weed and is light in draft. Turns every bit of the soil, leaving a nice, loose mulch at the surface, which conserves the moisture. An "XL" SERIES "ACME" HARROW will keep your orchard as clean as a kitchen floor and make possible large handsome fruit—the kind that grades "fancy."



Each Coulters Plows a Little Furrow, Completely Turning the Soil Twice and Thoroughly Pulverizing It.



Bottom View, "XL" Series "ACME" Harrow, Showing Overlapping Coulters.

The Acme Pulverizing Harrow Makes Perfect Seed Bed

The "ACME" Harrow cuts, crushes, levels, turns and smooths at one operation. It pulverizes the soil and makes a PERFECT SEED BED, insuring a maximum yield. Works well on all types of soil and on rolling or flat land.

The same design and principles of construction are embodied in all sizes, because this design and operating principle has, after thirty years of experiment and hard service, proved universally satisfactory.

The driver rides in a comfortable seat. When desired, deep penetration can be secured by laying a weight in the cradle under the seat.

The "ACME" Harrow is constructed of iron and steel throughout and is practically indestructible. Some are still in the service after 30 years of usage. Nothing to wear out but the coulters, and they are interchangeable.

"XL" Series Coulters

Any model of the "ACME" will be equipped with our "XL" Series Coulters if desired. These

overlapping coulters enable the entire surface to be cut, destroying all small weed growth in fallow land. (See page 3.)

No matter where your farm or what your soil may be, there's an "ACME" Harrow to meet your need. You can make no mistake in buying an "ACME." It's a safe investment. We have hundreds of testimonial letters from practical farmers everywhere praising the "ACME" Harrow. State and Government Experiment Stations have used the "ACME" for preparing seed beds, and they all say it is a wonderful Harrow and they would not be without it.

The "ACME" Pulverizing Harrow is made in all sizes, from single-horse to four-horses, and with a cultivating capacity ranging from 3 feet to 17½ feet in width.

The "ACME" has proved itself the all-around tillage tool, adapted to every soil and crop condition. Determine to test the "ACME" on your own farm. You will soon wonder how you ever farmed without one.



An "ACME" at Work on the Farm of T. R. Davis, Winter Haven, Fla.

SINGLE-HORSE CULTIVATORS

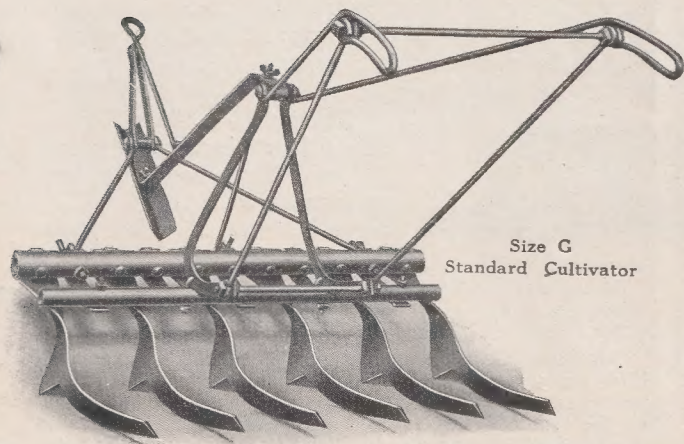
Size "H" Cultivator

Size "H"—A One-Horse Riding or Walking Harrow. For the small farmer or market gardener, the size "H" One-Horse Riding or Walking Harrow is indispensable. This harrow is constructed on the same principle as the larger sizes, with the addition of handles to aid in turning in close quarters, and, being equipped with the same coulters and spurs, accomplishes the same superior work as the larger size harrows. Being small and light in weight, it is easily handled in the garden or on the truck farm. Width of cut, 4 feet 4 inches. Weight, 100 lbs.

On request we will furnish, without extra charge, the Size "H" "ACME" Harrow with half the coulters turning to the right and half to the left. This equipment is especially desirable when cultivating berries or other row crops.

Equipment: Eight coulters, crushing spurs, seat and handles.

"XL" H—One-Horse Riding or Walking Harrow, equipped with our special "XL" coulters; cuts 4 feet 6 inches and weighs 104 lbs. (See page 3.)



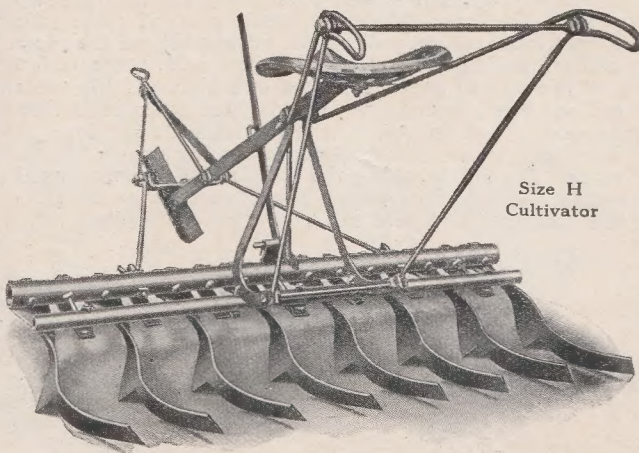
Size G
Standard Cultivator

Size "G" Standard Cultivator

Size "G"—A One-Horse Walking Harrow or Cultivator. A handy tool on the truck or small fruit farm, just right for row crops. On request we will furnish, without extra charge, the Size "G" Harrow with half the coulters turning to the right and half to the left. No seat is furnished with Size "G." Width of cut, 3 feet 2 inches. Weight, 62 pounds.

Equipment: Six coulters, crushing spurs and handles.

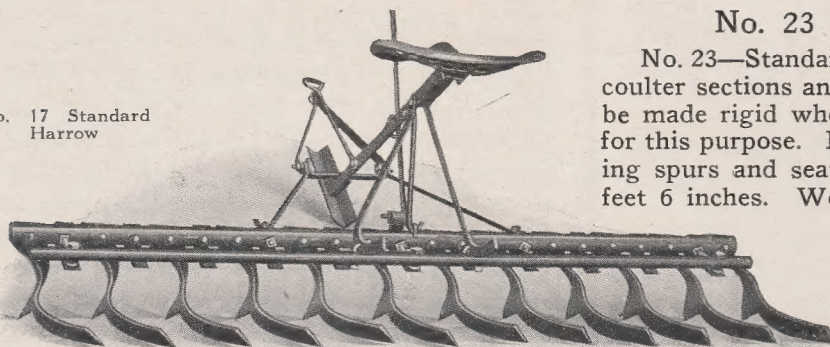
"XL" G—One - Horse Walking Harrow, weight 65 pounds. Same as above, but furnished with our special "XL" Coulters. (See page 3.)



Size H
Cultivator

TWO-HORSE HARROWS

No. 17 Standard Harrow



No. 17 Standard Harrow

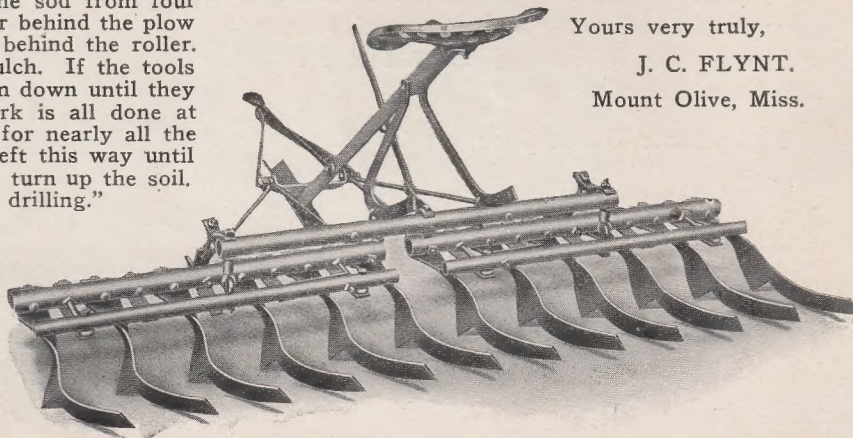
No. 17—Standard Rigid-Frame Harrow, Two-Horse Size. Width of cut, 6 feet 6 inches. Weight, 115 lbs. Equipment: 12 coulters, crushing spurs and seat as shown.

"XL" 17—Two-Horse "ACME" Harrow, cuts 6 feet 8 inches. Weight, 121 lbs. Same as the above, but furnished with our special "XL" Coulters. (See page 3.)

"ACME" IN THE WEST

Mr. C. E. Cook, Comanche, Yellowstone County, Montana, has used the "ACME" Pulverizing Harrow on plowed ground almost exclusively for the last two years. He says: "We first break the sod from four to five inches deep, pulling the packer behind the plow and an 'ACME' Pulverizing Harrow behind the roller. "We aim to get two inches of mulch. If the tools are not heavy enough, we weigh them down until they work the soil to suit us. This work is all done at one time, as we use traction power for nearly all the work. On fall breaking the soil is left this way until spring, when we harrow so as not to turn up the soil. We then drill and harrow again after drilling."

No. 23 Standard Harrow



No. 23 Standard Harrow

No. 23—Standard Two-Horse Harrow has two coulter sections and is flexible. The harrow may be made rigid when desired by braces provided for this purpose. Equipment: 12 coulters, crushing spurs and seat as shown. Width of cut, 6 feet 6 inches. Weight, 130 lbs.

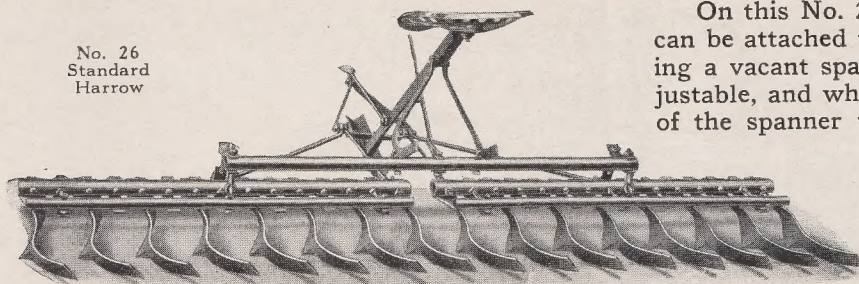
"XL" 23 — Two-Horse, cuts 6 feet 8 inches. Weight, 136 lbs. Same as above, but equipped with our "XL" Series Coulters. (See page 3.)

"ACME" IN THE SOUTH

Gentlemen—I have used your "ACME" something like six years. Have used different kinds of tools pulverizing my land, but I find nothing so satisfactory as the "ACME." I have a deep, clay subsoil; I break my land with three good mules—break and run harrow the same day so as to avoid clods drying out. I put the same team to your harrow and got on the seat, and I never saw prettier work done. It put the land in condition to plant any kind of seed. Have bedded my cotton land a few times and run the "ACME" right across the beds, and it puts it in fine shape for planting. It is a fine tool for sowing oats. Break your land, sow oats, run twice over them, cross the last time—it puts your oats in the finest shape you ever saw. It not only puts your land in fine shape, but it saves time and labor. I can heartily recommend your "ACME" Harrow to my fellow farmers to give perfect satisfaction if they will follow the above instructions.

Yours very truly,
J. C. FLYNT.
Mount Olive, Miss.

No. 26
Standard
Harrow



No. 26 Standard Harrows

No. 26—Large Two-Horse Harrow, has two coulters sections and is flexible. Although 30 pounds heavier than the No. 23, this harrow is easily handled by two horses in light soil. Width of cut, 8 feet 6 inches. Weight, 160 lbs.

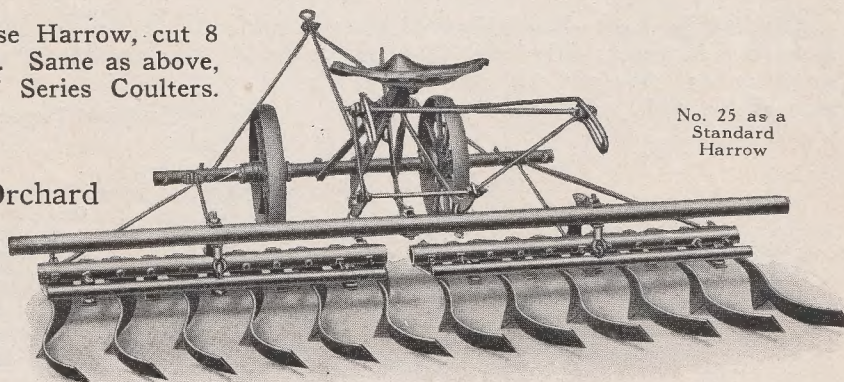
Specially adapted for summer fallowing. On light soils the large Two-Horse Harrow No. 26 can be used with equally as good results as the No. 23. It is particularly adapted to those sections where summer fallowing is done. With this size, as well as other sizes of the "ACME" Harrow, the perfect surface mulch is obtained. The weed growth is kept down, while the surface of the soil is constantly stirred, conserving the moisture and insuring a double quantity of moisture during the succeeding growing season.

Equipment: Sixteen coulters, crushing spurs and seat as shown.

"XL" 26—Large Two-Horse Harrow, cut 8 feet 8 inches. Weight, 168 lbs. Same as above, but equipped with our "XL" Series Coulters. (See page 3.)

Combined Harrows and Orchard Cultivators

No. 25 Standard Combined Harrow and Orchard Cultivator has two coulters sections and is flexible. Weight, 190 pounds.



No. 25 as a
Standard
Harrow

On this No. 25 style the two coulters sections can be attached to the ends of the spanner, leaving a vacant space in the center. These are adjustable, and when attached to the extreme ends of the spanner the width of spread is 9 feet 6 inches. On the return trip one section cuts the middle space, the other cutting outside; thus in two passages the soil will be cultivated 13 feet wide. If the sections are attached to the next inner holes of the spanner, the ground will be prepared 12 feet wide in two passages.

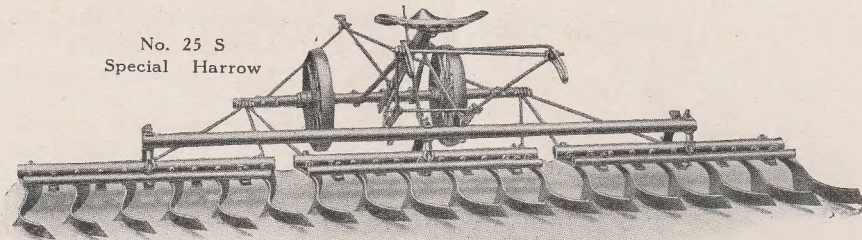
When trees are more than 14 feet apart, make more passages; but whatever the width between the trees may be, one end of the cultivator can be run under the limbs and near the trunks of the trees, with the horses clear of the branches.

When the coulters sections are set close together, as illustrated above, this tool cuts 6 feet 6 inches wide, same as the No. 23 Standard Harrow.

Equipment, 12 coulters, crushing spurs, seat, wheels and handles as shown.

The "XL" 25 Combined Harrow and Orchard Cultivator, Extension Model, is the same as above, but is equipped with our "XL" Series Coulters. Weight, 196 lbs. (See page 3.)

No. 25 S
Special Harrow



No. 25 Special Acme Harrow

Convenience of handling and popularity with orchardists of the No. 25 Harrow and Orchard Cultivator created a demand for a wider orchard cultivator that could also be used as a general purpose harrow. The "ACME" Pulverizing Harrow No. 25, made up of two wide flexible sections, working a complete width of 10 feet 4 inches, meets this demand.

No. 25 Center Section—Is a six coulters section, the same size as the two coulters sections regularly furnished on the No. 25 Harrow, to be placed between the outer sections of the No. 25 Harrow, making:

No. 25S Standard—This being the No. 25 SPECIAL Harrow and Orchard Cultivator with standard coulters. Equipment: Eighteen coulters, and otherwise the same as the No. 25. Width of cut, 9 feet 6 inches. Weight, 236 lbs.

"XL" 25S—Three-Horse Special Harrow and Orchard Cultivator with "XL" coulters, cuts 9 feet 8 inches. Weight, 251 lbs. Otherwise the same as No. 25S. (See page 3.)

"IT DOES THOROUGH WORK"

In regard to the work of the "ACME" Harrow, will say that we have been using this harrow every opportunity we have had since it has been received, and the work that this tool has done for us has been entirely satisfactory. The character of the soil in which it has been used is known here in Florida as pine land—that is, a sandy loam.

We consider the "ACME" Harrow one of the best tools for preparing a good seed bed that we have ever used. It does thorough work and leaves the seed bed in first-class condition to receive the seed. It is also an excellent implement for destroying weeds, especially on our sandy soil, where we get an early growth of weeds in the spring. We have used this harrow to prepare land for the planting of practically all farm crops.

You should have no hesitancy in advising your patrons to use the harrow on all kinds of land when it is in the proper condition for cultivation.

JOHN M. SCOTT, Ass't Director.

Agricultural Experiment Station, Gainesville, Florida.

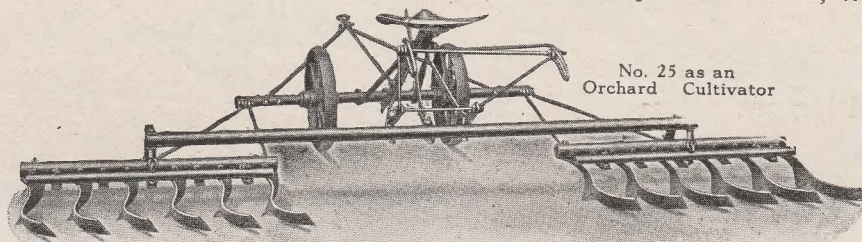
"USEFUL FOR COVERING SMALL GRAIN"

We have used your "ACME" Pulverizing Harrow to good advantage on this farm—the soil of which is mostly of a clay and sandy loam, especially on freshly plowed land—for the conservation of moisture and as a useful implement for covering small grain that has been sown broadcast.

A. R. RUSSELL, Supt. Farm.

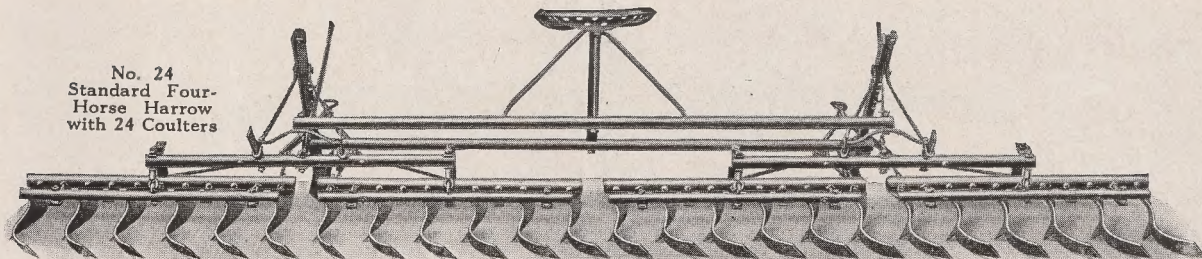
Agricultural Experiment Station, West Raleigh, N. C.

No. 25 as an
Orchard Cultivator



STANDARD FOUR-HORSE RIDING HARROWS

No. 24
Standard Four-
Horse Harrow
with 24 Coulters



IN DRY or SEMI-ARID REGIONS the SECRET of SUCCESS is the CONSERVATION OF MOISTURE. The plowed soil must be packed beneath the surface and all air spaces between the furrows eliminated, while the top soil is left mulched and in condition to attract and conserve the moisture coming from the earth and the atmosphere. With the mulched surface and the compacted lower soil depth, as produced by the "ACME," the ideal condition for conservation and availability of soil moisture is obtained.

No. 24—Standard Four-Horse Harrow, consists of two No. 23 Harrows coupled together. When desired, they may be uncoupled and each section used separately as a two-horse Harrow. Equipment: Twenty-four coulters, crushing spurs, seat and coupling No. 24, as shown. Width of cut, 13 ft. 6 in. Weight, 300 lbs.

"XL" 24—Four-Horse Harrow, cuts 13 ft. 8 in. Weight, 312 lbs. Equipped with our special

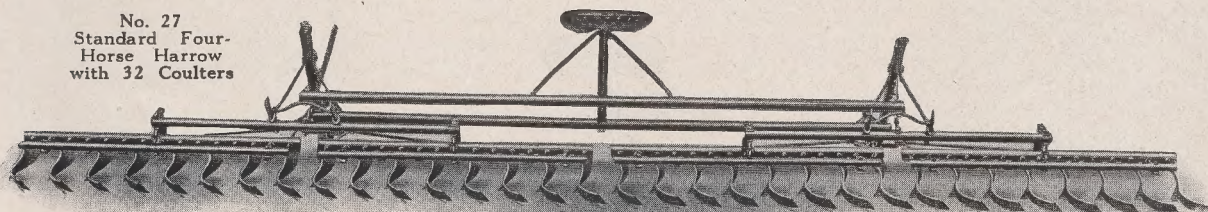
"XL" Coulters (see page 3); otherwise the same as the above.

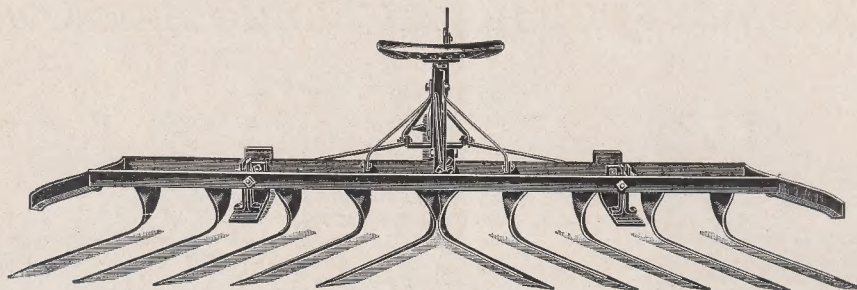
No. 27—Large Four-Horse Harrow, consists of two No. 26 Harrows coupled together. When desired they may be uncoupled and each section used separately as a large two-horse Harrow. Equipment: Thirty-two coulters, crushing spurs, seat and coupling No. 27, as shown. Width of cut, 17 ft. 6 in. Weight, 370 lbs.

Many farmers desire a fast-working harrow that will cover a big acreage and do it thoroughly without "lugging" the team. Such farmers will find in our No. 27 just the tool they have been looking for. Besides, the driver rides comfortably on a spring seat—no more tramping weary miles over soft ground.

"XL" 27—Large Four-Horse Harrow, cuts 17 ft. 8 in. Weight, 386 lbs. Equipped with our special "XL" Series Coulters (see page 3); otherwise the same as the above.

No. 27
Standard Four-
Horse Harrow
with 32 Coulters





"ACME" FOOT-LIFT WEEDER AND CULTIVATOR

Every fruitgrower needs a fast-working, light-draft tool for orchard tillage. The "ACME" Weeder is invaluable in the orchard as a mulcher and weed exterminator.

The "ACME" Foot-Lift Weeder is a riding weeder equipped with seat and foot-lift lever for raising the blades out of the ground to clear obstructions, or when passing to and from the field. The runners may be adjusted to regulate the depth of cut of the blades. They also support the frame when the blades are raised. The main frame is of angle steel, giving great strength and rigidity. The end pieces of the frame are so bent as to form guards, which prevent the blades from striking the trees. The easy curve of these end pieces reduces the injury to the bark to a minimum in event of striking the trunk.

The blades are bent at the proper angle to present the least possible resistance in the ground being worked. This makes the draft light and reduces the wear. The blades on all sizes are interchangeable.

The seat is adjustable so that the weight of the operator can be thrown forward or backward to suit the conditions of soil. It can be adjusted to bring foot-lift and ratchet within convenient reach of the operator.

The "ACME" Foot-Lift Weeder is made in the following sizes:

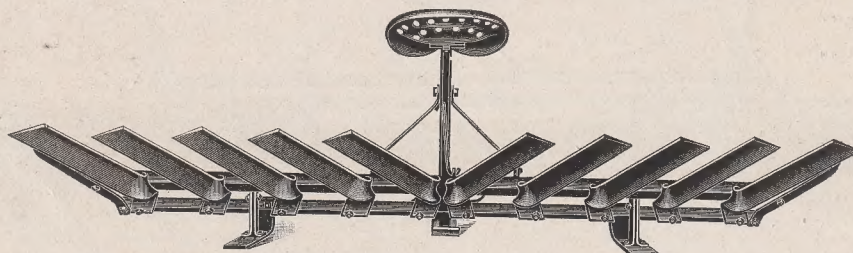
No. 5—	5	ft. cut.	140	lbs.
No. 7—	7	" "	165	"
No. 8—	8½	" "	199	"
No. 10—	10	" "	222	"
No. 12—	12	" "	247	"

"MORE WORK AND LESS EXPENSE"

Gentlemen—I have used many other makes of weeders for orchard and field work, but find the "ACME" FOOT-LIFT WEEDER to be the most successful one of all. It will do more work with less expense than any other orchard tool I have ever used.

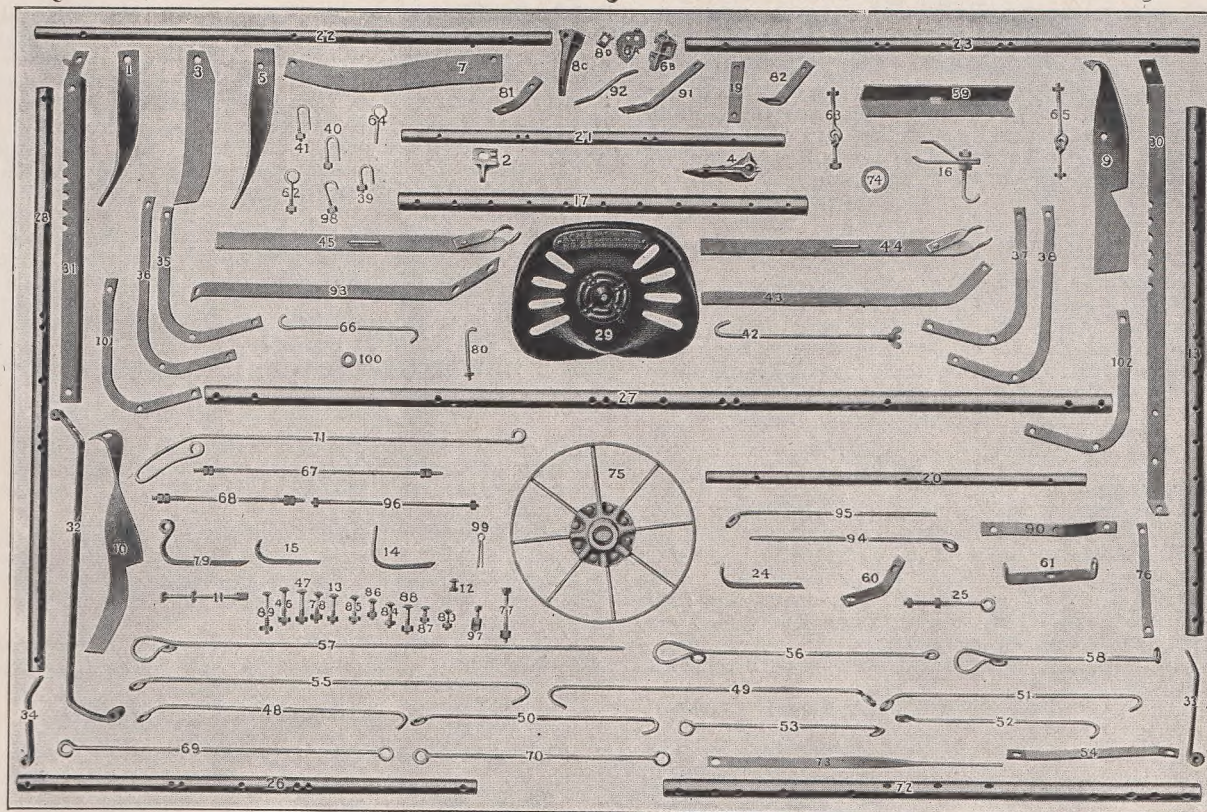
Yours very truly,

J. T. O'MARS.
Sutherlin, Oregon.



Showing Knives Elevated by Foot-Lift for Clearance and Transportation

EXTRA PARTS FOR THE "ACME" HARROW



Purdue Experiment Station
West Lafayette, Ind.

"ACME" Harrows are built for long, hard service, and some are still working after 30 years' usage. Our Service Department maintains a full line of repairs for the convenience of our customers. Order by number from the above illustration. Co-operate with us to secure 100 per cent. "ACME" efficiency. We will give you prompt and courteous service.



Stevens Orchard Company,
Nampa, Idaho

Read What the Potato King Says

The following letter is from Mr. Groves, Potato King of the Kaw Valley, Kansas. He has been using two "ACME" Harrows in preparing his soil for potatoes for the last ten years:

Gentlemen—We regard the "ACME" Harrow as one of the best tools for preparing the ground for seeding. We have used the "ACME" for over ten years on our potato ground in the Kaw Valley and would not be without it, as we know of no other harrow that will put the ground in as perfect condition.

J. G. GROVES & SON.

"IN USE OVER TWENTY-FIVE YEARS"

Gentlemen—Your harrow is the only implement that deserves the name of Harrow that we have ever used. My father, Mr. J. K. Rosenfield, the noted peony specialist, had one in use for over twenty-five years. No other machine would do what it would in the preparation of ground. We have used it as a road drag.

RENO ROSENFIELD, Omaha, Neb.

"A VERITABLE SURPRISE"

Gentlemen—The work that the "ACME" can do and *did* do for me last May on a piece of TOUGH NEW SOD which had been broken the previous fall and on which I inadvertently let the grass get a good start in the spring, was a veritable surprise to me. The "ACME" sliced off enough dirt to cover the grass and so finally killed it, and, although last season was known everywhere as an especially dry year, I had a magnificent crop of corn, which averaged 141 1/3 bushels of ears per acre.

E. H. TOLL, Oувry, Ontario.

RAISES BIG BEAN CROP

Gentlemen—We have used the "ACME" Harrow on our Nursery and Orchard farms the past year and find it of great value.

Last spring we prepared with the "ACME" Harrow twenty acres for beans. We had just taken a crop of nursery stock from the ground. The Harrow crushed the hard lumps that were in the field when the trees were removed, mellowed up and pulverized the ground thoroughly to the depth of five to six inches, leveled the ground and made a perfect seed bed. Our bean crop in this particular field went three bushels more to the acre than in an adjoining field, where we used our old farm drags and harrows; and as conditions of the ground were so nearly alike, both fields being cleared of trees last spring and planted to beans with the same seed and given the same care and cultivation in every way, except the harrowing, we attributed the better crop in the one field to the better seed bed made by the "ACME" Harrow.

KING BROTHERS' NURSERIES, Dansville, N. Y.

"COVERED ALL THE SEED EVENLY"

Dear Sirs—I recently purchased a No. 24 "ACME" Harrow and used it on a field that was covered with Johnson grass after plowing. The "ACME" has put this field in fine shape.

I then sowed the field broadcast to oats, harrowed the seed in with the same harrow and got a first-class stand. The "ACME" absolutely covered all the seed evenly and placed it at the right depth—something impossible with any other harrow.

I consider the "ACME" Harrow one of the best general-purpose tools ever made, and I would not try to farm without one.

J. W. SIMPKINS, Aывord, Texas.

